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Patents

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
Hans Schwade, et al.)
Serial No.: 10/612,195) Art Unit: 1744
Filed: July 2, 2003) Examiner: David A. Redding
For: Integral Packing Housing and)
Packing Material Unit)

AMENDMENT

Commissioner for Patents
Mail Stop Non-Fee Amendment
P.O. Box 1450
Alexandria, VA 22313-1450

November 1, 2007

Customer Number 35725

Sir:

In response to the Official Action mailed October 4, 2007, please cancel Claim 29 and enter the following amendments as shown to place the application in condition for allowance.

Respectfully submitted,

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Claims

1. (previously presented) An integral and removable packing unit, comprising:

a housing for removably holding a sacrificial packing material configured to form a steam seal between a sootblower steam tube and lance spindle when the packing unit is installed in an operative position in association with the steam tube and the spindle and the packing material is loaded by applying compression to the packing material; and

wherein the housing and packing material comprise an integral unit constructed so as to be installed to and removed from the steam tube and spindle with the packing material held intact within the housing.

2. (previously presented) The packing unit of claim 1, further comprising a compression unit for compressing the packing material to tighten the seal between steam tube and lance spindle when the packing unit is installed in the operative position.

3. (previously presented) The packing unit of claim 1, further comprising a detent mechanism for unloading the packing material to facilitate installing the packing unit on, and removing the packing unit from, the operative position.

4. (currently amended) The packing unit of claim 3, ~~wherein the further comprising a compression unit comprises comprising~~ one or more coil springs located between first and second compression plates.

5. (previously presented) The packing unit of claim 4, wherein:

the packing unit defines a cylindrical opening for receiving the steam tube, and

the packing material comprises a series of equally-sized, concentric, sacrificial packing rings having an inner dimension approximately equal to an outer dimension of the steam tube and an outer dimension approximately equal to an inner dimension of the housing.

6. (previously presented) The packing unit of claim 5, wherein the compression unit comprises a plurality of coil springs located around the cylindrical opening.

7. (previously presented) The packing unit of claim 6, wherein the detent mechanism comprises one or more set screws that threadably engage at least one of the compression plates to compress the coil springs and thereby unload the packing material.

8. (previously presented) The packing unit of claim 1, further comprising a packing wear monitor.

9. (previously presented) The packing unit of claim 8, wherein:
the compression unit comprises one or more coil springs located between first and second compression plates; and
the packing wear monitor comprises a viewing port revealing the linear travel position of the second compression plate.

10. (previously presented) The packing unit of claim 3, wherein the packing material is captured on the steam tube and compressed by the compression unit when the packing unit is in the operative position and the detent mechanism is inactive.

11. (previously presented) The packing unit of claim 3, wherein the packing material is captured on the steam tube and compressed between an internal bushing and a plunger coupled to the second compression plate when the packing unit is in the operative position and the detent mechanism is inactive.

12. (previously presented) An integral and removable packing unit, comprising:
a housing configured to be removably installed in an operative position in
association with a sootblower steam tube and lance spindle with the steam tube
passing through a cylindrical opening defined by the packing unit;

a plurality of concentric, equally-sized, sacrificial packing rings captured on the
steam tube and configured to form a steam seal between the spindle and the steam
tube when the packing unit is installed in an operative position and the packing material
is loaded by a compression unit; and

wherein the housing, packing rings and compression unit comprise an integral
unit constructed so as to be installed to and removed from the steam tube and spindle
with the packing material held intact within the housing.

13. (previously presented) The packing unit of claim 12, wherein the
compression unit is located within the housing.

14. (previously presented) The packing unit of claim 13, further comprising a
detent mechanism for unloading the packing material to facilitate installing the packing
unit on, and removing the packing unit from, the operative position.

15. (previously presented) The packing unit of claim 14, wherein the
compression unit comprises one or more coil springs located between first and second
compression plates.

16. (previously presented) The packing unit of claim 15, wherein the detent
mechanism comprises one or more set screws that threadably engage at least one of
the compression plates to compress the coil springs and thereby unload the packing
material.

17. (previously presented) The packing unit of claim 16, further comprising a
packing wear monitor including a viewing port revealing the linear travel position of the
second compression plate.

18. (previously presented) A sootblower comprising:
a steam tube;
a lance tube telescopically received on the steam tube and having an associated lance spindle ;
a housing for removably holding a sacrificial packing material configured to form a steam seal between the steam tube and the lance spindle when the packing unit is installed in an operative position and the packing material is loaded by applying compression to the packing material; and
wherein the housing and packing material comprise an integral unit constructed so as to be installed to and removed from the steam tube and spindle with the packing material held intact within the housing.

19. (previously presented) The sootblower of claim 18, further comprising a compression unit for compressing the packing material to tighten the seal between steam tube and lance spindle when the packing unit is installed in the operative position.

20. (previously presented) The sootblower of claim 19, further comprising a detent mechanism for unloading the packing material to facilitate installing the packing unit on, and removing the packing unit from, the operative position.

21. (previously presented) The sootblower of claim 20, wherein the compression unit comprises one or more coil springs located between first and second compression plates.

22. (previously presented) The sootblower of claim 19, wherein the detent mechanism comprises one or more set screws that threadably engage at least one of the compression plates to compress the coil springs and thereby unload the packing material.

23. (previously presented) The sootblower of claim 18, wherein the packing material is sacrificial, further comprising a packing wear monitor.

24. (previously presented) The sootblower of claim 23, further comprising a packing wear monitor.

25-29 (canceled)